



ज़ावर माइन्स
पिन कोड - 313901
जिला - उदयपुर (राज.)

HINDUSTAN ZINC LIMITED
हिन्दुस्तान जिंक लिमिटेड

Telephone - (0294) 2723400

Zawar Mines
PIN Code – 313901
Dist-Udaipur (Raj.)

HZL/ZM//ENV/2022/ 476

Date:05.11.2022

The Deputy Director (S), Scientist - C,
Ministry of Environment, Forest & Climate Change
Integrated Regional Office,
A- 209 & 218, Aranya Bhawan, Jhalana Institutional Area
Jaipur (Rajasthan) - 302004

Sub: – Six monthly Environment Compliance report for Zawar Group of Mines near Village-Zawar, Dist. Udaipur, Rajasthan of M/S Hindustan Zinc Limited

Ref: - Environment Clearance Letter No. – J-11015/259/2012-IA.II (M), dated 05.01.2017 & J-11015/259/2012-IA-II(M), dated 16.10.2020

Sir,

With reference to aforesaid subject and cited reference, please find enclosed six monthly compliance report for the conditions stipulated in the Environment Clearances of Zawar Group of Mines near Village-Zawar, Dist. Udaipur, Rajasthan of M/S Hindustan Zinc Limited for the period from April'2022 to September'2022 along with monitoring data report for your kind consideration.

We trust that the measures taken towards environmental safeguards comply with the stipulated environmental conditions. We look forward to your further guidance which shall certainly help us in our endeavor for further improve upon our Environmental Management Practices.

Thanking You,

For Hindustan Zinc Limited

Yours faithfully,

V2. J V2

(Vinod Kumar)
CEO- IBU Zawar
Hindustan Zinc Ltd

CC: SOFT COPY OF REPORT ENCLOSED WITH CD

- Incharge (Zonal Office)
Central Pollution Control Board,
3rd Floor, Sahkar Bhawan, North T.T. Nagar, Bhopal – 462003
- Member Secretary,
Rajasthan State Pollution Control Board,
4, Institutional Area, Jhalana Doongri, Jaipur-302004 (Raj)
- Regional Officer,
Rajasthan State Pollution Control Board,
F-470, Near UCCI Building, Madri Industrial Area, Udaipur-313003 (Raj)
- • Office Copy Env Cell

Environment Clearance Letter No. – J-11015/259/2012-IA.II (M), dated 05.01.2017		
S.No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
1	Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Rajasthan and any other Court of Law, if any, as may be applicable to this project.	<ul style="list-style-type: none"> The directions of the Hon'ble courts shall be adhered to.
2	This Environmental Clearance is subject to obtaining requisite NBWL Clearance from the Standing Committee of National Board for Wildlife, if any, applicable for this Mining project	<ul style="list-style-type: none"> Not applicable, as the Jaisamand Wildlife Sanctuary and other protected areas are not falling within the 10 km of aerial distance of mine lease area. Letter certifying the same by DCF-Wildlife is attached as Annexure-1 Further, Zawar mine lease boundary is outside the eco sensitive zone of Jaisamand wildlife and sanctuary
3	No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.	<ul style="list-style-type: none"> We have obtained Forest Diversion/ Clearance for carrying out Mining activities (total forest land: 1537.91 ha which includes diversion of 114.94 ha for surface rights and diversion of 1422.97 ha underground mining). Recent renewal of Forest diversion/ clearance was obtained vide letter no: F.No.8-1/1997-FC dated 23.01.2015
4	The project proponent shall obtain Consent to Operate from the State Pollution Control Board, Rajasthan and effectively implement all the conditions stipulated therein.	<ul style="list-style-type: none"> Consent to operate have been obtained from the Rajasthan State Pollution Control Board (RSPCB) vide letter no. CTO for Mines: F(Mines)/Udaipur(Sarada)/53(1)/2016-2017/4491-4495 dated 12/01/2021 valid up to 31.12.2022 CTO for Beneficiation Plant: F(CPM)/Udaipur(Sarada)/2(I)/2017-2018/10088-10090 dated 21/03/2018 valid up to 31.12.2022 & F(HDF)/Udaipur (Sarada)/1(1)/2020-2021/4885-4887 dated 29/01/2021 valid up to 31.12.2022 The conditions stipulated therein are being implemented and complied.

5 The Proponent should install online Ambient Air Quality Monitoring System and there should be system for display of digital AAQ data within 03 months at least at three locations as per wind direction. Online provisions of pH and turbidity meters at discharge points of STP and ETP and also at water storage ponds in the mining area may be made. Project Proponent should display the result digitally in front of the main Gate of the mine site

- CAAQMS have been installed at 3 locations as per wind direction with digital display of data in front of the main gate of the mine site. Also provided pH and turbidity meters.



DIGITAL DISPLAY




CAAQM STATION



PH & TURBIDITY METERS

- We are maintaining zero discharge from our operations.

6	<p>The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors. The report on slope and stability monitoring should be sent to MoEF&CC and its Regional office every six-months.</p>	<ul style="list-style-type: none"> • We are carrying out mining activities through underground mining method. Waste rock generated is backfilled into underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities. • Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated. <div data-bbox="704 380 1258 651" data-label="Image"> </div> <p>WASTE DUMP REHABILITATED AND TURNED INTO ROCK GARDEN</p>
7	<p>The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation has been followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adopted to that micro climate. This may be recommended to be studied by hiring Expert Ecology Group.</p>	<ul style="list-style-type: none"> • We are carrying out mining activities through underground mining method. Waste rock generated is backfilled into underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities. • Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated.
8	<p>There is need for regular monitoring of invertebrates and aquatic life of water bodies including the reservoir located close to the mining lease to establish that fish and other animals including the water is not contaminated with heavy metal. There could be a research on "bio accumulation of heavy metals in invertebrates" to completely establish that there is no impact of mining.</p>	<ul style="list-style-type: none"> • We are regularly carrying out monitoring and studying invertebrates and aquatic life of water bodies. Study conducted by M/s JM Environet Pvt Ltd indicated that there is no adverse impact of mining operation.
9	<p>A specialized Institution may be hired to carry out ecological survey on the plant species to evaluate their growth in terms of stunted, deformed and seed viability. The sensitive species and indicator species to heavy metal pollution may be screened out and plantation accordingly designed. Similarly, uptake of Zinc, Cadmium and lead etc. by crops and vegetables grown in the crop lands around the mining lease may be studied. Bottom sediment analysis of ponds, wells and Rivers to ascertain the level of accumulation of heavy metal may be</p>	<ul style="list-style-type: none"> • We are regularly carrying out the ecological survey of plant species and plantation is carrying out regularly in and around our operation. Study conducted by M/s JM Environet Pvt Ltd indicated that there is no adverse impact of mining operation.

	done.	
10	The Proponent shall conduct an Occupational health study with respect to the pressure impact on ear drums as person goes underground and implement the recommendations.	<ul style="list-style-type: none"> We conducted Occupational Health study with respect to the pressure impact on Ear drum in the underground working through M/s Sure Safety and no impact was found.
11	Project Proponent shall carry out vibration studies well before approaching any such habitats or other buildings to evaluate the zone of influence and impact of blasting on the neighborhood. Within 500 meters of such sites vulnerable to blasting vibrations, avoidance of use of explosives and adoption of alternative means of mineral extraction. A provision for monitoring of each blast should be made so that the impact of blasting on nearby habitation and dwelling units could be ascertained. The covenant of lease deed under Rule 31 of MCR 1960 provides that no mining operations shall be carried out within 50 meters of public works such as public roads and buildings or inhabited sites except with the prior permission from the Competent Authority.	<ul style="list-style-type: none"> Blast Vibration monitoring is being done regularly by inhouse team. CIMFR has been engaged for blast vibration monitoring and other controlling measures. Controlled blasting with major use of electronic detonator
12	Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. The material transfer points should invariably be provided with Bag filters and or dry fogging system. Belt-conveyors should be fully covered to avoid air borne dust; Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.	<ul style="list-style-type: none"> Water sprinkling is done on haul road in mines on regular basis to arrest fugitive dust if any. Water sprinklers have been provided at transfer points. Covered Conveyors have been provided to control fugitive emissions. Roads at surface are black tarred/ cemented and Mechanised vacuum road sweepers have been deployed to clean roads on the surface to arrest fugitive dust generation.
		 <p>Mechanized vacuum road sweepers</p>

13	The monitoring of PM 2.5 in the vehicle emission shall be conducted to improve the mine environment and report submitted to the Regional Office of the MoEFCC.	<ul style="list-style-type: none"> MoEF recognized laboratory are engaged for carrying out environment monitoring. Ambient PM 2.5 monitoring is done at the surface and readings are well within norms.
14	The Project Proponent reported that there are seven Schedule-I species viz. Peafowl (<i>Pavo cristatus</i>), Osprey (<i>Pandion haliaetus</i>), Tawny eagle (<i>Aquila rapax</i>), Crested honey buzzard (<i>Pernis ptilorhynchus</i>), Shikra (<i>Accipiter badius</i>), Leopard (<i>Panthera pardus</i>), Indian pangolin (<i>Manis crassicaudata</i>) in the study area. The PP shall implement the Conservation Plan and enhance the budget for implementation of Conservation Plan for Schedule I Species and also increase the budget for plantation/green belt development. The Proponent shall implement the Wildlife Conservation Plan along with the funds so allocated with consultation of Chief Wild Life Warden of the State Govt. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Lucknow and the Chief Wild Life Warden of the State Govt.	<ul style="list-style-type: none"> Chief Wild Life Warden, Jaipur advised in July 2019 to develop wild life conservation plan as per "SOP issued in May 2019". Based on the SOP, site developed and submitted Schedule-1 conservation plan to DCF, Udaipur (Wild life) on 03.06.2020 & submitted revised conservation plan on 03.07.2020 incorporating recommendations received from DCF (Wild life), Udaipur Schedule-1 conservation plan has been forwarded by DCF, Udaipur to CCF, Udaipur. CCF, Udaipur reviewed and forwarded "wild life conservation plan" to Chief Wild Life Warden, Jaipur in last week of July 2020. In principal approval of Schedule-1 wildlife conservation plan received. In order to obtain final approval, 20% Payment is being deposited. Site has undertaken various conservation measures for conservation so far: constructed 39 check dams for soil conservation & water recharge and plantation in the lease area. Also, working areas are properly fenced/ boundary in place to avoid any interaction. In 2021, contributed 8.8 lacs rupees to forest department towards development cum maintenance of safari park/ golden park and forest nursery. Received In- principal approval for Schedule-I conservation plan. We have deposited an amount of Rs. 3,69,00,000/- through online transaction to the account of "Rajasthan Protected Areas, Conservator society, Udaipur". Details of online transaction done is UTR- 2052671107403
15	Proponent shall carry out monitoring of lead in the blood samples of the employees and the villagers in the areas surrounding the mine in their schedule of health check-up. The nearby water bodies shall be monitored every six months and report submitted to Regional office of the MoEFCC to ascertain impact due to lead contamination.	<ul style="list-style-type: none"> Third party monitoring of lead in blood of employees and villagers is being done and continued. Monitoring reports indicate that lead level in blood are below the norms. Details enclosed in Annexure 5 Monitoring of nearby water bodies is conducted as part of post project monitoring and monitored data enclosed.
16	Implementation of Action Plan on the issues raised during the Public Hearing shall be ensured. The Project Proponent shall complete all the tasks as per the Action Plan submitted with budgetary provisions during the Public Hearing.	<ul style="list-style-type: none"> We have taken appropriate actions for the issues raised during public hearing. Detailed are enclosed as Annexure 8.
17	Implementation of the outcome of study with regard to "optimization of blast design parameter for the safety and stability of surface structures and subsequent monitoring of vibration on the surface structures for their long term stability" which was carried out by Central Institute of Mining and Fuel Research should be ensured.	<ul style="list-style-type: none"> Blast Vibration monitoring is being done regularly by inhouse team. CIMFR has been engaged for blast vibration monitoring and other controlling measures. Controlled blasting with major use of electronic detonator
18	Continuous monitoring of radioactive elements, if any, shall	<ul style="list-style-type: none"> Analysis done for Mine dewatering and there is absence of any radioactive elements. (Monitoring

<p>be undertaken till entire mine is dewatered and report has to be submitted to MoEFCC Regional Office. Periodic monitoring of any adverse impact of Radon and its daughter products on any worker should be included in the Occupational Health Monitoring Programme.</p>	<p>report enclosed as Annexure 6.</p>
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Environment Clearance Letter No. – J-11015/259/2012-IA.II (M), dated 05.01.2017		
S.No.	STANDARD CONDITIONS	COMPLIANCE STATUS
1	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval.	<ul style="list-style-type: none"> Presently, mine is in operation stage. This point is noted for future adherence and compliance.
2	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.	<ul style="list-style-type: none"> Complied. Mining is carried out as per Mine plan duly approved by IMB vide letter no. 584(4)(3)(1868)/2021- क्षेत्रीय अजम dated 15/07/2021
3	No change in the calendar plan including excavation, quantum of mineral and waste should be made.	<ul style="list-style-type: none"> Calendar plan, as per approved mine plan, is being adhered to.
4	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.	<ul style="list-style-type: none"> Water is drawn from Captive Tidi Dam with permission of Water Resources department, Govt. of Rajasthan vide agreement dated 17.09.1976 and amended time to time.
5	Mining shall be carried out as per the provisions outlined in mining plan approved by Indian Bureau of Mines (IBM) as well as by abiding to the guidelines of Directorate General Mines Safety (DGMS).	<ul style="list-style-type: none"> Mining is being carried out as per the Mining Plan duly approved by IBM vide letter no. 584(4)(3)(1868)/2021- क्षेत्रीय अजम dated 15/07/2021 and as per the guidelines of DGMS.
6	The lands which are not owned by Proponent, mining will be carried out only after obtaining the consents from all the concerned land owners as per the provisions of the Mineral Concession Rules, 1960 and MMDR Act, 1957.	<ul style="list-style-type: none"> Noted and Complied.
7	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment, Forest and Climate Change its Regional Office.	<ul style="list-style-type: none"> Digital processing of the entire lease area using remote sensing technique is being carried out regularly once in three years Last study was done in August 2021. Copy of report was submitted in previous compliance report submitted in November 2021.
8	The critical parameters as per the Notification 2009 such as PM10, PM2.5, NOx and SOx etc. in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS))]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The circular No. J-20012/1/2006-IA.II (M) dated 27.05.2009 issued	<ul style="list-style-type: none"> Monitoring is being done for ambient air quality and effluent and monitored data are enclosed herewith. Display board has been placed near main gate. Required details is uploaded on company website https://www.hzlindia.com/ at Sustainability section > Environment compliance > Zawar Mines

	by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.	
9	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. Fugitive dust emissions from all the sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board	<ul style="list-style-type: none"> • Water sprinkling is carried out at loading, unloading and transfer points. • Closed Conveyors are provided to control fugitive emissions. • Regular water sprinkling is done at haul roads underground. • Roads are regularly cleaned via mechanized vacuum sweeper to control fugitive dust. • Ambient Air Monitoring is being carried out fortnightly at 8 stations and are within limits. • Detailed reports are enclosed as Annexure - 2.
10	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. The monitoring shall be carried out four times in a year pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board.	<ul style="list-style-type: none"> • Ground water level and quality is being monthly monitored through network of piezometers & wells in and around mine area. • 6 Piezometers have been provided at the downstream of tailing dam. • Monitoring reports are being submitted to MoEF, IRO, Jaipur and CPCB, Bhopal on six monthly basis as part of 6 monthly compliance of EC and to Central Ground Water Authority on yearly basis as part of annual compliance of CGWA NOC. • No natural water course and/or water resources have been obstructed due to any mining operations. • Detailed reports are enclosed as Annexure-3
11	Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug well located in village should be incorporated to ascertain the impact of mining over ground water table.	<ul style="list-style-type: none"> • The natural water bodies and or streams which are flowing in an around the village, are not being disturbed. There are no perennial nallah in the and around the lease. • Entire fresh water requirement is sourced from a captive surface water source i.e Tidi dam. No ground water is extracted for industrial use except for the ground water intersection due to mining. • Pre-mining ground water table is not available as modern mining is going on in the area since 1950. Ground water recharge structures are being constructed for ground water recharge. • Ground water level and quality is being regularly monitored through network of piezometers & key wells in and around mine area. • Detailed reports are enclosed as Annexure-3
12	Regular monitoring of water quality upstream and downstream of water	<ul style="list-style-type: none"> • Ground water level and quality is being regularly monitored through network of piezometers & key wells

	<p>bodies shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.</p>	<p>in and around mine area.</p> <ul style="list-style-type: none"> Monitoring reports are being submitted to MoEF, IRO, Jaipur and CPCB, Bhopal on six monthly basis as part of 6 monthly compliance of EC and to Central Ground Water Authority on yearly basis as part of annual compliance of CGWA NOC. Detailed reports are enclosed as Annexure-3
13	<p>Transportation of the minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The project proponent shall bear the cost towards the widening and strengthening of existing public road network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.</p>	<ul style="list-style-type: none"> Road used for transportation of ore does not pass through any village
14	<p>The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night PPS must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.</p>	<ul style="list-style-type: none"> Mining being underground, there is no such impact. Also, nearby villages are far away from the surface infrastructures in the core zone. Noise level monitored are well within the limit.
15	<p>Main haulage road in the mine should be provided with permanent water sprinklers and other roads should be regularly wetted with water tankers fitted with sprinklers. The material transfer points should invariably be provided with Bag filters and or dry fogging system. In case of Belt- conveyors facilities the system should be fully covered to avoid air borne dust; Use of effective sprinkler system to suppress fugitive dust on haul roads and other transport roads shall be ensured.</p>	<ul style="list-style-type: none"> Being underground mines, main haulage roads are underground. Water sprinkling is carried out to suppress fugitive dust on haul roads All the roads used for ore transportation are tarred/ cemented.

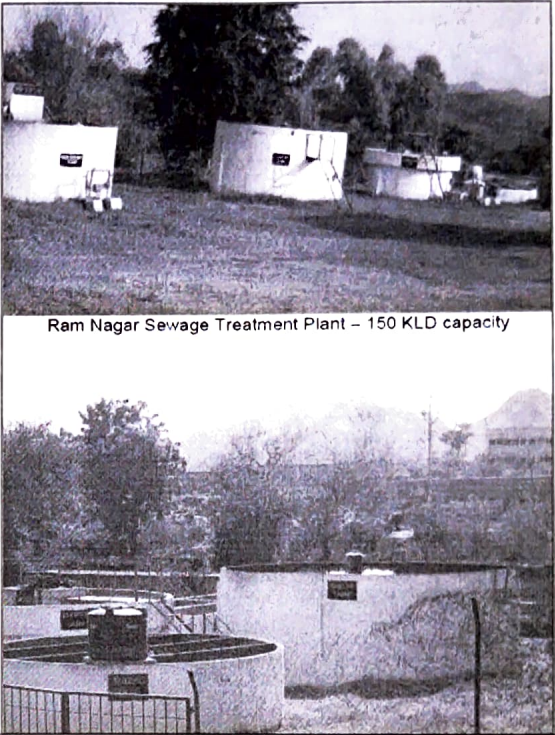
16	<p>Sufficient number of Gullies to be provided for better management of water. Regular Monitoring of pH shall be included in the monitoring plan and report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.</p>	<ul style="list-style-type: none"> There are no artificial gullies in the mine lease because of absence of surface waste dump.
17	<p>There shall be planning, developing and implementing facility of rainwater harvesting measures on long term basis and implementation of conservation measures to augment ground water resources in the area in consultation with Central Ground Water Board.</p>	<ul style="list-style-type: none"> The captive Tidi dam with a capacity of 8.5 mcm constructed by HZL is a major rainwater harvesting measure form which the water is sourced for the project. We have constructed 39 rainwater harvesting around all mines. <div data-bbox="881 499 1332 846" data-label="Image"> </div> <div data-bbox="1050 856 1159 884" data-label="Caption"> <p>TIDI DAM</p> </div> <div data-bbox="847 921 1288 1169" data-label="Image"> </div> <div data-bbox="1013 1178 1136 1205" data-label="Caption"> <p>Checkdam</p> </div> <div data-bbox="854 1241 1288 1671" data-label="Image"> </div> <div data-bbox="1013 1677 1136 1705" data-label="Caption"> <p>Checkdam</p> </div>
18	<p>The Project Proponent has to take care of gullies formed on slopes. Dump mass should be consolidated with proper filling/leveling with the help of dozer/compactors.</p>	<ul style="list-style-type: none"> We are carrying out mining activities through underground mining method. Waste rock generated is backfilled in to underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities.

		<ul style="list-style-type: none"> • Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated.
19	<p>The reclamation at waste dump sites shall be ecologically sustainable. Scientific reclamation shall be followed. The local species may be encouraged and species are so chosen that the slope, bottom of the dumps and top of the dumps are able to sustain these species. The aspect of the dump is also a factor which regulates some climatic parameters and allows only species adopted to that micro climate.</p>	<ul style="list-style-type: none"> • All the initial waste dumps have been reclaimed and became ecologically sustainable. • No fresh waste dumps in the mine lease.
20	<p>The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time. The maximum height of the dumps shall not exceed 8m and width 20 m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.</p>	<ul style="list-style-type: none"> • The project is expansion of an underground mine and beneficiation plant within existing area. Thus, no top soil is generated. • We are carrying out mining activities through underground mining method. Waste rock generated is backfilled in to underground voids. Part of the waste rock are used for stabilizing slopes of tailing storage facilities. • Presently, there is no storage of waste rock on surface. All initial waste dumps have already been vegetated & rehabilitated. • Compliance reports are submitted to MoEF, ROR, Jaipur and CPCB, Bhopal on six monthly basis.
21	<p>Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly. The drains, settling tanks and check dams of appropriate size, gradient and</p>	<ul style="list-style-type: none"> • The waste generated from the mine development work is dumped in the voids created due to stopping. Part of the waste rock is utilized for covering slope of tailing storage facility. • Being underground mine, there is no generation of overburden and hence OB dumps are there. • Drains are maintained at required places like around tailing storage facilities, inside beneficiation plants. The drains are cleaned and maintained on regular basis. • The concentrate from the beneficiation plant is accommodated in concentrate stockpile yards having covered sheds and is secured by stone masonry walls of appropriate height. • Concentrate from the stockpile yard is directly loaded into trucks mechanically/ manually for end use at

	length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.	captive smelter.
22	Plantation shall be raised in a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, around water body, along the roads etc. by planting the native species in consultation with the local DFO/Agriculture Department and as per CPCB Guidelines. The density of the trees should be around 2500 plants per ha. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five years.	<ul style="list-style-type: none"> • Till date, plantation has been done in 170.85 ha in including rehabilitated areas, around beneficiation plant, on matured tailing dam, roads and social a forestry. • Apart from this, we have carried out plantation in Plantation in nearby forest area through forest department in 75 ha in RDF 1 & RDF 2 during FY 2019-20 and 75 ha in RDF 1 & RDF 2 during FY 2021-22. We have further deposited 35 lacs in May 2022 to forest department for carrying out plantation work.
23	Project Proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29 th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area", if any, applicable to the project.	<ul style="list-style-type: none"> • There is no adverse impact on the habitations as our mining activities are underground and suitable measures have been taken wrt environment management.
24	The Project Proponent shall make necessary alternative arrangements, where required, in consultation with the State Government to provide alternate areas for livestock grazing, if any. In this context, Project Proponent should implement the directions of the Hon'ble Supreme Court with regard to acquiring grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded against felling and plantation of	<ul style="list-style-type: none"> • No grazing land has been acquired as part of operations.

	such trees should be promoted.																					
25	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.	<ul style="list-style-type: none">Schedule-1 conservation plan has been prepared in consultation with Deputy Conservator of forest, Udaipur and submitted for approval to Chief Wild Life Warden In-principal approval received. We have received In principal approval for Schedule-I conservation plan. We have deposited an amount of Rs. 3,69,00,000/- through online transaction to the account of "Rajasthan Protected Areas, Conservator society, Udaipur". Details of online transaction done is UTR- 2052671107403Site has undertaken various conservation measures for conservation so far: constructed 39 check dams for soil conservation & water recharge and plantation in the lease area. Also, working areas are properly fenced/ boundary in place to avoid any interaction.In 2021, we have also contributed 8.8 lacs rupees to forest department towards development cum maintenance of safari park/ golden park and forest nursery.																				
26	As per the Company Act, the CSR cost should be 2% of average net profit of last three years. Hence CSR expenses should be as per the Company Act/Rule for the Socio Economic Development of the neighborhood Habitats which could be planned and executed by the Project Proponent more systematically based on the Need based door to door survey by established Social Institutes/Workers. The report shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office on six monthly basis.	<ul style="list-style-type: none">CSR expenditure is being done for the Socio Economic Development of the neighborhood based on the Need based door to door survey by established Social Institutes/Workers. <table><tr><th colspan="4">CSR HIGHLIGHTS AT ZAWAR MINES</th></tr><tr><th>SAKHI AND SAMADHAN</th><th>SHIKSHA SAMBAL AND MINDSPARK</th><th>KHUSHI AND NANDGHAR</th><th>SMILE ON WHEELS</th></tr><tr><td>5071 women connected through 394 SHGs, 32 VO's and 1 federation under Sakhi project.</td><td>Shiksha Sambal Project is running in 10 Secondary and Sr. Secondary Schools at Zawar for Improving board results.</td><td>389 Anganwadi centres and 29 Nandghars are functioning at Zawar.</td><td>Under Health Project doorstep medical facilities through Mobile health Van are being provided in 28 villages.</td></tr><tr><td>50 Poultry units have been established at Zawar by tribal women through convergence established with Krishi Vigyan Kendra, SAKHI & BAIF, extending livelihood support to 50 Households</td><td>Upcoming Diwali camps supported by Employee Volunteerism planned for a 10-Day focused Learning Camp reaching out to over 2,000 children of 10 Govt. schools across Zawar</td><td>Preschool education, health and nutrition facilities are being provided to more than 26,950 children up to 6 years of age as well as to pregnant and lactating women in the community</td><td></td></tr><tr><td>Preventive:</td><td></td><td></td><td></td></tr></table>	CSR HIGHLIGHTS AT ZAWAR MINES				SAKHI AND SAMADHAN	SHIKSHA SAMBAL AND MINDSPARK	KHUSHI AND NANDGHAR	SMILE ON WHEELS	5071 women connected through 394 SHGs, 32 VO's and 1 federation under Sakhi project.	Shiksha Sambal Project is running in 10 Secondary and Sr. Secondary Schools at Zawar for Improving board results.	389 Anganwadi centres and 29 Nandghars are functioning at Zawar.	Under Health Project doorstep medical facilities through Mobile health Van are being provided in 28 villages.	50 Poultry units have been established at Zawar by tribal women through convergence established with Krishi Vigyan Kendra, SAKHI & BAIF, extending livelihood support to 50 Households	Upcoming Diwali camps supported by Employee Volunteerism planned for a 10-Day focused Learning Camp reaching out to over 2,000 children of 10 Govt. schools across Zawar	Preschool education, health and nutrition facilities are being provided to more than 26,950 children up to 6 years of age as well as to pregnant and lactating women in the community		Preventive:			
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Preventive:																						

		<ul style="list-style-type: none"> Fumigation in all the 28 villages Awareness campaigns and pamphlet distribution <p>Curative (in collaboration with Dept. of Animal Husbandry)</p> <ul style="list-style-type: none"> Medical Camps in 8 core villages Distributed 4000 medical kits <p>Under Sakhi Project, Poshan week was celebrated by giving training & awareness campaigns to more than 1500 women across the 28 villages of ZM</p>		<p>Under the Khushi project, Poshan Week was celebrated with nutrition related awareness sessions conducted with 500+(adolescent girls, lactating mothers and pregnant women) in our operational area</p>	
27	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	<ul style="list-style-type: none"> There are no construction labor residing in the site. 			
28	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs	<ul style="list-style-type: none"> Following noise control measures have been taken: <ul style="list-style-type: none"> Specifying permissible noise level limit for equipment below 85 dB(A) Acoustic enclosures with insertion loss of at least 25 dB(A) Suitable evasee at the outlet of ventilation fans Plantation for attenuation of noise Employees are provided with ear plugs / muffs with proper training and awareness for its usage 			

		<ul style="list-style-type: none"> Monitoring results are attached as Annexure – 4.
29	<p>Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.</p>	<ul style="list-style-type: none"> Oil and grease trap is provided at workshop and water is reused for alternate uses. Zero discharge is being maintained. Sewage is treated and reused for plantation and dust suppression. Two STP's with combined capacity of 450 KLD have been provided  <p>Ram Nagar Sewage Treatment Plant – 150 KLD capacity</p>
30	<p>Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.</p>	<ul style="list-style-type: none"> Personnel Protective Equipments (PPEs) are provided to the workers. Initial and refresher training are also provided covering safety and occupational health aspects. Regular safety interactions are also carried out.
31	<p>A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.</p>	<ul style="list-style-type: none"> There is a separate Environment Management cell with qualified environmental professionals headed by AGM-Environment under the direct control of CEO- IBU Zawar and Corporate HSE.
32	<p>The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office.</p>	<ul style="list-style-type: none"> Being complied regularly. Year wise expenditure are reported to MoEF, Integrated Regional Office, Jaipur. Expenses during Apr 22 to Sep 22 is Rs. 115.00 Lakhs.
33	<p>The project authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.</p>	<ul style="list-style-type: none"> Project is expansion of existing underground mines, no land development is required.
34	<p>The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental</p>	<ul style="list-style-type: none"> Six monthly reports are being submitted on regular basis for the EC.

	safeguards to the Ministry of Environment, Forest and Climate Change, its Regional Office, Central Pollution Control Board and State Pollution Control Board.	
35	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	<ul style="list-style-type: none"> Noted and complied.
36	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	<ul style="list-style-type: none"> No suggestion / representation has been received from any Panchayat / local NGO.
37	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office/ Tehsildar's Office for 30 days.	<ul style="list-style-type: none"> Copies of Environment Clearance have been submitted to RSPCB Regional Office, District Industry Centre and Collector's office/ Tehsildar's Office
38	<p>The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment, Forest and Climate Change at</p> <p>www.environmentclearance.nic.in and a copy of the same should be forwarded to the Regional Office.</p>	<ul style="list-style-type: none"> It was advertised in Rajasthan Patrika and Dainik Bhaskar. Advertisements are attached as Annexure-7.

Environment Clearance Letter No. – J-11015/259/2012-IA-II(M), dated 16.10.2020

S.No.	Specific Conditions	Compliance Status
(a)	Gap plantation shall be carried in consultation with State Forest Department in the total Mining lease area where the surface rights were not acquired. These plantations shall be maintained and monitoring to be done to achieve the survival rate of 90%.	Deposited Rs 100 lacs to state forest department in FY 2020-21 and carried out plantation in 25 ha and 50 ha under RDF-1 & 2 scheme of forest department. A part from this, carried out 2500 nos. of plantation at tailing storage facility and 1000 nos. as gap plantation in mine area.
(b)	The conversation plan for Schedule-I species reported in the study are namely. 1 reptilian (Bengal Monitor Lizard), 3 avifaunal (Osprey, Indian Peafowl and White rumped Vulture), 2 mammals (Indian Pangolin and Indian Leopard) and 1 butterfly (Crimson Rose) should be prepared and implemented in consultation with State Forest Department including the recommendations of the Chief Wildlife Warden.	Schedule-1 conservation plan has been prepared in consultation with Deputy Conservator of forest, Udaipur and submitted for approval to Chief Wild Life Warden. In principal approval received. 20% payment of overall conservation plan is being made for obtaining final approval. We have received In-principal approval for Schedule-I conservation plan. We have deposited an amount of Rs. 3,69,00,000/- through online transaction to the account of "Rajasthan Protected Areas, Conservator society, Udaipur". Details of online transaction done is UTR-2052671107403 Site has undertaken various conservation measures for conservation so far: constructed 39 check dams for soil conservation & water recharge and plantation in the lease area. Also, working areas are properly fenced/ boundary in place to avoid any interaction. In 2021, we have also contributed 8.8 lacs rupees to forest department towards development cum maintenance of safari park/ golden park and forest nursery.
(c)	As proposed no additional water shall be used for the proposed expansion. The requirement shall be met from the existing daily water demand of 14,000 KLD, out of which 2,400 KLD water is used for mining purpose, 8,600 KLD for beneficiation plant and 3,000 KLD for domestic use which is drawn from Tidi Dam through pipeline.	Total water requirement for Mines, beneficiation and domestic purposes is kept below the 14,000 cum/day/. Source of fresh water is Tidi dam (surface water).
(d)	The project proponent should obtain the NOC from the CGWA regarding the intersection of workings with the groundwater table.	NOC for ground water intersection from CGWA for all the four operating mines i.e. Mochia Mines, Balaria Mine, Baroi Mine and Zawarmala mine are in place.
(e)	Mist spraying arrangements shall be provided to suppress the dust emission at the loading, crushing and transfer points. The effective water spraying arrangements shall be made at the tailing dam to control the air borne dust.	We have provided suitable water spraying arrangement for water spraying to arrest fugitive dust generation. Also, moisture is maintained in ore while loading and crushing. Water is sprinkled in the tailing storage facility on regular basis.
(f)	The project proponent should implement all the additional measures that are proposed in the present application.	Noted and complied.

**Office of The Deputy Conservator of Forests Wildlife
Udaipur**

Sajjanganrh, Udaipur Post Box No.161, Phone No.029482800009
Email ID -dcfwludz@gmail.com

F.9(10) Survey/DCFWL/ Udr/2016-17/ 11715

Date : 29/11/16

TO,

V.Jayaraman
VP & Head - EOHS
Hindustan Zinc Limited
Yashad Bhawan, Udaipur

Sub : Issue of certification regarding Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/ Elephant Reserves (existing as well as proposed), if any within 10 km of the Zawar mine lease.


Ref: Hindustan zinc Limited, Udaipur Letter No. Nil Date:24.11.2016

Dear sir,

With reference to the above mentioned subject certified G.T.Sheet & details of GPS Co-ordinates of two blocks submitted by you is verified by Forest Range Officer Jaisamand based on his factual report by vide letter no. 602 dated 29.11.2016 saying that no National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves & Jaisamand wildlife Sanctuary within 10 km of submitted Zawar mine lease area.

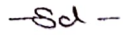
Hence this is certified that Jaisamand Wildlife Sanctuary & other P.A.'s mentioned above are not falling in 10 km of aerial distance of mine lease area.
Encl. : Certified G.T.Sheet

Sincerely


(Dr.T.Mohanraj)
Deputy Conservator of Forests
Wildlife Udaipur
Date :

F.9(10) Survey/DCFWL/ Udr/2016-17/
Copy to

- 1 Deputy Conservator of Forests, Udaipur
- 2 Forest Range Officer, Wildlife Jaisamand


(Dr.T.Mohanraj)
Deputy Conservator of Forests
Wildlife Udaipur

ANNEXURE – 2

AIR MONITORING AT ZAWAR GROUP OF MINES								
STACK MONITORING (All units are in mg/Nm ³)								
Sampling Points	Parameters	Prescribed Limits	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep- 22
Mochia Crusher Stack	SPM	150	37.24	27.61	34.54	27.65	38.30	23.02
Balaria Crusher Stack	SPM	150	27.19	36.08	29.26	26.21	14.19	15.98
DE - 2 (Mill 2)	SPM	150	31.72	18.34	35.99	28.03	34.18	32.08
DG Set 6 MW	SPM	75	-	-	-	-	-	53.64
	NOX (as NO ₂) (At 15% O ₂ , dry basis in ppmv)	710	-	-	-	-	-	341
	CO	150	-	-	-	-	-	132
	NMHC (as C)	100	-	-	-	-	-	64

AMBIENT AIR QUALITY MONITORING (All units are in µg/m ³)							
Apr-22							
S.No.	STATIONS	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Pb
1	Mill Office	67.04	39.01	2.03	12.85	340	0.12
2	Mochia Mine	79.74	31.18	4.42	11.08	310	0.10
3	Balaria Mine	65.27	38.53	2.03	11.35	330	0.11
4	Administrative Block	72.56	29.45	4.57	13.52	340	0.11
5	Zawar Mala Mine	68.76	28.48	4.42	13.75	370	0.12
6	Baroi Mine	68.32	28.96	3.62	12.48	320	0.13
Prescribed Limits		100	60	80	80	2000	1

May-22							
S.No.	STATIONS	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Pb
1	Mill Office	66.20	32.55	4.30	14.87	350	0.08
2	Mochia Mine	71.91	26.15	4.45	14.63	280	0.12
3	Balaria Mine	69.51	28.26	4.29	14.61	290	0.11
4	Administrative Block	76.45	34.17	4.86	16.19	280	0.12
5	Zawar Mala Mine	77.10	37.27	4.77	16.26	310	0.12
6	Baroi Mine	76.01	34.70	4.80	15.46	310	0.12
Prescribed Limits		100	60	80	80	2000	1

AMBIENT AIR QUALITY MONITORING (All units are in µg/m³)							
Jun-22							
S.No.	STATIONS	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Pb
1	Mill Office	71.85	36.52	4.12	13.26	320	0.18
2	Mochia Mine	74.50	37.87	3.03	13.12	300	0.21
3	Balaria Mine	67.49	32.48	3.25	13.95	290	0.12
4	Administrative Block	65.88	31.28	3.20	13.20	290	0.18
5	Zawar Mala Mine	70.01	38.95	3.85	13.41	300	0.15
6	Baroi Mine	68.20	34.17	3.66	13.28	260	0.19
Prescribed Limits		100	60	80	80	2000	1

Jul-22							
S.No.	STATIONS	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Pb
1	Mill Office	46.47	23.22	2.92	12.65	290	0.15
2	Mochia Mine	39.90	19.78	3.24	14.78	320	0.10
3	Balaria Mine	42.49	21.17	4.38	11.57	290	0.14
4	Administrative Block	39.31	18.18	3.43	11.67	270	0.11
5	Zawar Mala Mine	43.88	19.38	2.81	13.90	310	0.17
6	Baroi Mine	36.02	18.79	3.38	10.54	300	0.10
Prescribed Limits		100	60	80	80	2000	1

Aug-22							
S.No.	STATIONS	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Pb
1	Mill Office	46.47	19.42	3.60	12.87	280	0.10
2	Mochia Mine	51.88	25.23	3.80	12.67	220	0.10
3	Balaria Mine	50.03	21.04	3.69	13.05	190	0.10
4	Administrative Block	49.03	21.82	3.38	12.60	170	0.10
5	Zawar Mala Mine	43.08	20.93	3.98	12.44	240	0.11
6	Baroi Mine	51.42	18.24	4.07	12.58	230	0.10
Prescribed Limits		100	60	80	80	2000	1

AMBIENT AIR QUALITY MONITORING (All units are in µg/m ³)							
Sep-22							
S.No.	STATIONS	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	Pb
1	Mill Office	56.77	29.98	3.84	12.71	340	0.09
2	Mochia Mine	61.26	27.03	3.72	12.98	330	0.12
3	Balaria Mine	64.60	26.36	3.70	12.88	240	0.09
4	Administrative Block	74.02	23.25	3.67	12.38	310	0.10
5	Zawar Mala Mine	45.85	21.70	3.86	12.63	250	0.09
6	Baroi Mine	56.51	23.58	3.78	13.25	240	0.12
Prescribed Limits		100	60	80	80	2000	1

ANNEXURE – 3

Ground Water Quality at Zawar Group of Mines								
May-22 (Except pH all values are in mg/lit.)								
S.No.	Parameters	IS : 10500:2012		Zawarmata Hand pump	Zawarmata Well	Naka Well	Mahadev ki Nal Well	Tiger Well
		Acceptable	Permissible					
1	pH	6.5-8.5	No Relaxation	7.48	6.68	7.12	6.87	7.12
2	Chlorides	250	1000	75.21	136.92	100.28	75.21	71.35
3	TSS	-	-	3	5	3	4	4
4	Zinc	5	15	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
5	Lead	0.01	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
6	Iron	0.3	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
7	Copper	0.05	1.5	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
8	Cadmium	0.003	No Relaxation	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)
9	Cyanides	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
10	Nickel	0.02	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
11	Cobalt	-	-	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
12	Chromium	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

Aug-22 (Except pH all values are in mg/lit.)								
S.No.	Parameters	IS : 10500:2012		Zawarmata Hand pump	Zawarmata Well	Naka Well	Mahadev ki Nal Well	Tiger Well
		Acceptable	Permissible					
1	pH	6.5-8.5	No Relaxation	7.49	7.49	7.48	6.98	7.19
2	Chlorides	250	1000	64.58	78.27	52.83	73.38	78.27
3	TSS	-	-	5	7	4	4	5
4	Zinc	5	15	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	0.08	BDL(<0.01)
5	Lead	0.01	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
6	Iron	0.3	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
7	Copper	0.05	1.5	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
8	Cadmium	0.003	No Relaxation	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)
9	Cyanides	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
10	Nickel	0.02	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
11	Cobalt	-	-	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
12	Chromium	0.05	No Relaxation	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

Piezometer Well Water Quality at Zawar Group of Mines

Jun-22 (Except pH all values are in mg/ltr)									
S.No.	Parameters	IS : 10500:2012		Near Bridge (Vala Patel House) (Pz - 01)	Near In front of Old Tailing Dam (Pz - 02)	Near Tailing Dam Pump House (Pz - 03)	Near Magazine Area (Pz - 04)	Near Below Tailing Pipe Lines (Pz - 05)	Near Way to Tailing Dam Road (Pz 06)
		Acceptable	Permissible						
1	pH	6.5-8.5	No Relaxation	7.10	7.16	7.73	7.30	7.30	7.09
2	TSS	-	-	8	9	10	8	9	12
3	Chlorides	250	1000	38.57	50.14	38.57	59.78	44.36	50.14
4	Zinc	5	15	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
5	Lead	0.01	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
6	Iron	0.3	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
7	Copper	0.05	1.5	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
8	Cadmium	0.003	No Relaxation	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001
9	Cyanides	0.05	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
10	Nickel	0.02	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
11	Cobalt	-	-	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
12	Chromium	0.05	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01

Sep-22 (Except pH all values are in mg/ltr)

S.No.	Parameters	IS : 10500:2012		Near Bridge (Vala Patel House) (Pz - 01)	Near In front of Old Tailing Dam (Pz - 02)	Near Tailing Dam Pump House (Pz - 03)	Near Magazine Area (Pz - 04)	Near Below Tailing Pipe Lines (Pz - 05)	Near Way to Tailing Dam Road (Pz - 06)
		Acceptable	Permissible						
1	pH	6.5-8.5	No Relaxation	6.81	6.88	7.30	7.93	7.55	7.78
2	TSS	-	-	8	20	11	9	8	11
3	Chlorides	250	1000	53.81	58.71	29.35	53.81	58.71	58.71
4	Zinc	5	15	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
5	Lead	0.01	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
6	Iron	0.3	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
7	Copper	0.05	1.5	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
8	Cadmium	0.003	No Relaxation	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001
9	Cyanides	0.05	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
10	Nickel	0.02	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
11	Cobalt	-	-	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
12	Chromium	0.05	No Relaxation	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01

Tidi Upstream and Downstream Water Quality at Zawar Group of Mines

May-22 (Except pH all values are in mg/ltr)

S.No.	Parameters	IS : 10500:2012		Tidi Upstream	Tidi Downstream
		Acceptable	Permissible		
1	pH	6.5-8.5	No Relaxation	7.49	7.42
2	Chlorides	250	1000	119.96	119.96
3	TSS	-	-	6	7
4	Zinc	5	15	BDL (<0.01)	BDL (<0.01)
5	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)
6	Iron	0.3	No Relaxation	BDL (<0.01)	BDL (<0.01)
7	Copper	0.05	1.5	BDL (<0.01)	BDL (<0.01)
8	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)
9	Cyanides	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
10	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)
12	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
13	Sulphate	200	400	356.50	388.40

Aug-22 (Except pH all values are in mg/ltr)					
S. No.	Parameters	IS : 10500:2012		Tidi Upstream	Tidi Downstream
		Acceptable	Permissible		
1	pH	6.5-8.5	No Relaxation	7.71	8.10
2	Chlorides	250	1000	45.01	45.01
3	TSS	-	-	8	10
4	Zinc	5	15	BDL (<0.01)	BDL (<0.01)
5	Lead	0.01	No Relaxation	BDL (<0.01)	BDL (<0.01)
6	Iron	0.3	No Relaxation	BDL (<0.01)	BDL (<0.01)
7	Copper	0.05	1.5	BDL (<0.01)	BDL (<0.01)
8	Cadmium	0.003	No Relaxation	BDL (<0.001)	BDL (<0.001)
9	Cyanides	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
10	Nickel	0.02	No Relaxation	BDL (<0.01)	BDL (<0.01)
11	Cobalt	-	-	BDL (<0.01)	BDL (<0.01)
12	Chromium	0.05	No Relaxation	BDL (<0.01)	BDL (<0.01)
13	Sulphate	200	400	13.62	22.25

Ground Water Level Monitoring at Zawar Group of Mines

S.No.	Piezometers	Apr-22 (m)	May-22 (m)	Jun-22 (m)	Jul-22 (m)	Aug-22 (m)	Sep- 22 (m)
1.	Near Bridge (Vala Patel House) (Pz - 01)	1.37	1.42	1.23	1.02	0.89	0.63
2.	Near In front of Old Tailing Dam (Pz - 02)	6.48	6.54	6.03	5.64	4.32	3.49
3.	Near Tailing Dam Pump House(Pz - 03)	2.89	2.93	2.64	2.53	2.01	1.67
4.	Near Magazine Area(Pz - 04)	4.43	4.49	4.13	4.16	3.67	3.28
5.	Near Below Tailing Pipe Lines(Pz - 05)	3.52	3.58	3.17	3.32	2.83	2.46
6.	Near Way to Tailing Dam Road(Pz - 06)	1.81	1.92	1.52	1.56	1.09	1.01

S.No.	Wells in the area	Apr-22 (m)	May-22 (m)	Jun-22 (m)	Jul-22 (m)	Aug-22 (m)	Sep- 22 (m)
1.	Zawarmata Well	4.69	5.23	5.62	4.07	0.93	1.41
2.	Mahadev ki Nal Well	2.82	2.96	4.01	2.72	0.18	1.06

DETAILS OF QUARTERLY STP ANALYSIS REPORT

S.No.	PARAMETERS	Standard	Ashok Nagar			Ram Nagar		
			Apr-22	May-22	Jun-22	Apr-22	May-22	Jun-22
1	pH Value	Between 5.5 to 9.0	7.20	7.10	7.34	7.36	7.07	7.28
2	Total Suspended Solids	Not to exceed 100 mg/l	25	28	34	7	26	24
3	Oil & Grease	Not to exceed 10 mg/l	2	4	4	2	4	5
4	Biochemical Oxygen Demand (3 days at 27 °C)	Not to exceed 30 mg/l	4.36	20.71	9.67	5.11	7.80	11.40
5	Chemical Oxygen Demand	Not to exceed 250 mg/l	32.64	154.05	88.13	26.11	66.40	104.45
6	Total Residual Chlorine	Not to exceed 1 mg/l	BDL <0.01	BDL <0.1	BDL <0.1	BDL <0.1	BDL <0.1	BDL <0.1
7	Total kjeldahl Nitrogen (as N)	Not to exceed 100 mg/l	22.40	25.42	26.33	4.20	18.45	6.12
8	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	8.96	12.80	10.63	2.80	8.27	1.06
9	Sulphide(as S)	Not to exceed 2.0 mg/l	BDL <0.1	BDL <0.1	BDL <0.1	BDL <0.1	BDL <0.1	BDL <0.1
10	Nitrate Nitrogen	Not to exceed 10 mg/l	8.50	3.39	7.24	3.00	2.84	6.69
11	Chlorides	Not to exceed 1000 mg/l	97.84	111.54	91.21	92.95	97.84	85.51
12	Sulphates	Not to exceed 1000 mg/l	30.66	52.00	25.25	36.00	47.33	28.37

DETAILS OF QUARTERLY STP ANALYSIS REPORT

S.No.	PARAMETERS	Standard	Ashok Nagar			Ram Nagar		
			Jul -22	Aug-22	Sep -22	Jul -22	Aug-22	Sep -22
1	pH Value	Between 5.5 to 9.0	7.11	7.27	7.67	7.21	7.04	7.15
2	Total Suspended Solids	Not to exceed 100 mg/l	28	30	9	27	27	7
3	Oil & Grease	Not to exceed 10 mg/l	5	4	2	5	3	2
4	Biochemical Oxygen Demand (3 days at 27 °C)	Not to exceed 30 mg/l	13.75	10.23	5.88	15.56	6.40	6.20
5	Chemical Oxygen Demand	Not to exceed 250 mg/l	127.30	81.60	23.52	146.88	48.96	35.28
6	Total Residual Chlorine	Not to exceed 1 mg/l	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1
7	Total kjeldahl Nitrogen (as N)	Not to exceed 100 mg/l	21.72	18.28	3.79	17.44	16.29	3.45
8	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	9.79	11.27	1.07	5.88	8.76	1.79
9	Sulphide(as S)	Not to exceed 2.0 mg/l	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1	BDL<0.1
10	Nitrate Nitrogen	Not to exceed 10 mg/l	2.51	2.56	4.19	1.09	1.43	4.95
11	Chlorides	Not to exceed 1000 mg/l	71.25	97.84	115.71	66.50	112.52	77.14
12	Sulphates	Not to exceed 1000 mg/l	33.37	30.25	35.25	28.87	33.75	30.25

Tailing Dam Reclaim Water (Except pH all values are in mg/lit.)								
S.No	Parameters	Standard	Apr-22	May – 22	Jun-22	Jul-22	Aug- 22	Sep-22
1	pH	5.5-9.0	7.00	7.03	7.02	7.36	7.27	7.56
2	Chlorides	-	220.14	95.89	109.26	58.90	97.84	62.68
3	TSS	100	14	13	18	16	17	16
4	Oil and Grease	10	3	5	4	3	3	3
5	BOD 3 days at 27°C	30	9.25	12.33	8.29	9.20	7.33	6.63
6	COD	250	94.66	111.55	75.07	48.96	52.22	36.96
7	Zinc	5	0.43	1.30	0.44	0.32	0.08	0.35
8	Lead	0.1	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
9	Iron	3	0.08	0.09	0.04	0.02	0.02	BDL <0.01
10	Copper	3	0.04	BDL <0.01	0.06	0.03	0.04	BDL <0.01
11	Cadmium	2	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001	BDL <0.001
12	Cyanides	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
13	Nickel	3	0.09	0.05	0.03	BDL <0.01	BDL <0.01	0.04
14	Cobalt	-	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01
15	Chromium	2	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01	BDL <0.01

ANNEXURE – 4

AMBIENT NOISE MONITORING AT ZAWAR GROUP OF MINES [in dB (A)]		
Stations/Month	Jun-22	
	Day	Night
Mill Office	63.5	55.2
Central Mochia Mine	56.8	48.7
Balaria Mine	60.4	51.7
Administrative Block	58.2	47.2
Zawar Mala Mine	59.8	50.4
North Baroi Mine	58.7	48.7
Hydrofill Plant	60.1	51.9
Dry Tailing Plant	58.9	49.5
Hospital	53.4	42.6
Ramnagar Colony	54.7	42.9
West Mochia Mine	62.8	53.6
Central Baroi Mine	63.4	52.7
Permissible Limit	75 dB (A)	65 dB (A)

AMBIENT NOISE MONITORING AT ZAWAR GROUP OF MINES [in dB (A)]		
Stations/Month	Sep-22	
	Day	Night
Mill Office	63.6	55.3
Central Mochia Mine	56.9	48.8
Balaria Mine	60.3	51.6
Administrative Block	58.2	47.3
Zawar Mala Mine	59.8	50.3
North Baroi Mine	58.7	48.8
Hydrofill Plant	60.2	51.8
Dry Tailing Plant	58.8	50.9
Hospital	53.4	42.5
Ramnagar Colony	53.4	42.8
West Mochia Mine	62.9	53.6
Central Baroi Mine	63.5	52.6
Permissible Limit	75 dB (A)	65 dB (A)

ANNEXURE – 5

NO	NAME	AGE	GENDER	Unit	Date	Lead (µg/l)
1	MANISH KUMAR KALAL	30	MALE	BALARIA	02/09/2022	44.45
2	RAJESH KUMAR MEENA	29	MALE	BALARIA	02/09/2022	79.88
3	DINESH KESHU LAL JI	34	MALE	BALARIA	02/09/2022	62.46
4	ANKIT KUMAR	25	MALE	BALARIA	02/09/2022	140.96
5	DINESH KUMAR MEENA VAISA	29	MALE	BALARIA	02/09/2022	78.95
6	PRABHU LAL MEENA	35	MALE	BALARIA	02/09/2022	31.93
7	LALSINGH SISODIA	26	MALE	BALARIA	02/09/2022	28.79
8	HARISH RUP LAL MEENA	27	MALE	BALARIA	02/09/2022	38.39
9	HITESH KALAL	30	MALE	BALARIA	02/09/2022	30.85
10	MOHAN LAL MEENA	29	MALE	BALARIA	02/09/2022	38.62
11	LALIT KUMAR MEENA	24	MALE	BALARIA	02/09/2022	17.97
12	KULDEEP SINGH PANWAR	28	MALE	BALARIA	02/09/2022	58.15
13	SHIV PRAKASH SINGH	44	MALE	BALARIA	02/09/2022	76.88
14	M RAJARAM	47	MALE	ADMIN BLOCK	01/09/2022	77.12
15	SHAILENDRA MEGHVAN	46	MALE	ADMIN BLOCK	01/09/2022	20.84
16	RITU ARORA	26	FEMALE	ADMIN BLOCK	01/09/2022	37.87
17	PREETAM NAGDA	27	MALE	ADMIN BLOCK	01/09/2022	57.05
18	KARTIKEY BANSAL	23	MALE	ADMIN BLOCK	01/09/2022	55.27
19	MUHAMMAD NAEEM	24	MALE	ADMIN BLOCK	01/09/2022	25.29
20	RAM BHUSHAN	29	MALE	ADMIN BLOCK	01/09/2022	126.52
21	KAUSHALJEET PANDEY	30	MALE	ADMIN BLOCK	01/09/2022	66.4
22	DEEPAK GAKHREJA	40	MALE	ADMIN BLOCK	01/09/2022	51.78
23	SHALINI PALIWAL	26	FEMALE	ADMIN BLOCK	01/09/2022	18.38
24	ANUSHA RAVI	22	FEMALE	ADMIN BLOCK	01/09/2022	63.08
25	ABISHEK N R	22	MALE	ADMIN BLOCK	01/09/2022	100.94
26	SHUBHAM JAIN	23	MALE	ADMIN BLOCK	01/09/2022	21.63
27	RAHNEESH KUMAR SHUKLA	39	MALE	NORTH BAROI	01/09/2022	74.89
28	LAXMAN LAL MENNA	36	MALE	NORTH BAROI	01/09/2022	53.29
29	SANJAY CHOUDHARY	28	MALE	NORTH BAROI	01/09/2022	74.99
30	MANOHA LAL	52	MALE	NORTH BAROI	01/09/2022	25.44
31	RAJU KUMAR SINGH	46	MALE	NORTH BAROI	01/09/2022	111.98
32	SANDEEP GURJUR	37	MALE	NORTH BAROI	01/09/2022	54.3
33	ABDUL BASSED	31	MALE	NORTH BAROI	01/09/2022	62
34	MRIDUL SEN SINGHA	31	MALE	NORTH BAROI	01/09/2022	51.44
35	PRAHLAD GRJAR	29	MALE	NORTH BAROI	01/09/2022	44.83
36	NANJI MOGA	43	MALE	NORTH BAROI	01/09/2022	61.69
37	MUKESH KUMAR	36	MALE	NORTH BAROI	01/09/2022	34.25

38	JIVATRAM MEENA	31	MALE	NORTH BAROI	01/09/2022	63.78
39	RAMESH DEVAJI	34	MALE	NORTH BAROI	01/09/2022	57.93
40	SURESH KUMAR CHAUDHARY	32	MALE	CENTRAL BAROI	01/09/2022	103.51
41	ABDUL KADIR KHAN	30	MALE	CENTRAL BAROI	01/09/2022	45.86
42	VIKAS VISHNAV	30	MALE	CENTRAL BAROI	01/09/2022	59.54
43	SULINDER SINGH	49	MALE	CENTRAL BAROI	01/09/2022	73.44
44	RAMESH KUMAR	30	MALE	CENTRAL BAROI	01/09/2022	48.39
45	ARJUNSINGH	36	MALE	CENTRAL BAROI	01/09/2022	58.88
46	OM PRAKASH SHARMA	34	MALE	CENTRAL BAROI	01/09/2022	124.85
47	ANIL KUMAR MEENA	27	MALE	CENTRAL BAROI	01/09/2022	63.07
48	SHANKAR LAL MEENA	27	MALE	CENTRAL BAROI	01/09/2022	110.32
49	BHAGWATI LAL JANWA	26	MALE	CENTRAL BAROI	01/09/2022	72.33
50	BABU LAL	40	MALE	CENTRAL BAROI	01/09/2022	76.76
51	NARAYAN LAL MEENA	48	MALE	CENTRAL BAROI	01/09/2022	71.89
52	AMRIT LAL MEENA	27	MALE	CENTRAL BAROI	01/09/2022	91.14
53	MUKESH KUMAR	27	MALE	PORTAL	03/09/2022	60.85
54	PRABHU LAL MEENA	42	MALE	PORTAL	03/09/2022	40.16
55	MEGHRAJ NARA	36	MALE	PORTAL	03/09/2022	56.13
56	BARMA MEENA	55	MALE	PORTAL	03/09/2022	109.5
57	DULLAY SINGH	41	MALE	PORTAL	03/09/2022	43.58
58	KHEMRAJ KHARADI	23	MALE	PORTAL	03/09/2022	80.1
59	BHIMRAJ MEENA	33	MALE	PORTAL	03/09/2022	61.95
60	JEETENDRA KUMAR KUSHWAHA	31	MALE	PORTAL	03/09/2022	54.37
61	PREETAM MEENA	27	MALE	PORTAL	03/09/2022	80.43
62	HAJA RAM HURMA JI	30	MALE	PORTAL	03/09/2022	63.4
63	BABU LAL RAM	40	MALE	PORTAL	03/09/2022	52.4
64	HARISH KUMAR MEENA	29	MALE	PORTAL	03/09/2022	45.48
65	PREM SHANKAR MEENA	31	MALE	PORTAL	03/09/2022	90.49
66	CHITIMIREDDY SANTOSH BABU	30	MALE	MILL	02/09/2022	69.01
67	MAHESH VSIHWAKARMA	27	MALE	MILL	02/09/2022	93.28
68	RAMESH	33	MALE	MILL	02/09/2022	115.37
69	VENKTESH GUNURU	24	MALE	MILL	02/09/2022	54.9
70	SATHEESH KAMDIPALLI	35	MALE	MILL	02/09/2022	51.49
71	HARSIH SHARMA	32	MALE	MILL	02/09/2022	24.83
72	MOHIT KUMAR	25	MALE	MILL	02/09/2022	90.08
73	DILDAR SINGH CHAHAL	28	MALE	MILL	02/09/2022	66.87
74	AHASAAN MOHAMMAD	29	MALE	MILL	02/09/2022	32.58
75	MOHAMMAD AARIF	26	MALE	MILL	02/09/2022	72.36
76	SURAJ MAI MEENA	30	MALE	MILL	02/09/2022	54.12
77	RAMESH MEENA	33	MALE	MILL	02/09/2022	44.75
78	MD RAHAMATULLAH	27	MALE	MILL	02/09/2022	105.14

79	RAMESH JIVAJI	30	MALE	MILL	02/09/2022	35.59
80	GIRIRAJ SHARMA	32	MALE	MILL	02/09/2022	69.36
81	VAIBHAV VYAS	27	MALE	MILL	02/09/2022	59.28
82	RAM LAL PRAJAPAT	29	MALE	MILL	02/09/2022	125.84
83	FULA BEHRA	34	MALE	MILL	02/09/2022	28.4
84	ISHEAR CHANDR	42	MALE	MILL	02/09/2022	59.41
85	ISHWAR LAL KHATIK	30	MALE	MILL	02/09/2022	23.18
86	NILESH KUMAR	25	MALE	MILL	02/09/2022	52.23
87	CHNADRA SHEKAR	28	MALE	MILL	02/09/2022	70.17
88	LAXMAN LAL MEENA	34	MALE	MILL	02/09/2022	39.78
89	GOVIND RAM MEENA	28	MALE	MILL	02/09/2022	74.76
90	PRAVEEN KUMAR PRAJAPAT	36	MALE	MILL	02/09/2022	47.72
91	RAHUL PARIK	29	MALE	MILL	02/09/2022	93.81
92	ANIL KUMAR MEENA	28	MALE	MILL	02/09/2022	46.74
93	SHANTI LAL	31	MALE	MILL	02/09/2022	80.02
94	LAXMAN SINGH	47	MALE	MILL	02/09/2022	97.79
95	TULSHI RAM MEENA	24	MALE	MILL	02/09/2022	126.89
96	BABU AMARCHAND	35	MALE	MILL	02/09/2022	65.34
97	BADRI LAL MEENA	28	MALE	MILL	02/09/2022	76.54
98	RAMESH NATHU JI	42	MALE	MILL	02/09/2022	24.6
99	LALURAM MEENA	28	MALE	MILL	02/09/2022	67.05
100	DEVI DEEN PANDEY	37	MALE	MILL	02/09/2022	78.54



Original



ULR NO: TC53122000000851F

TC-5312

Modern Test Centre

- (Accredited To AERB vide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL through ISO/IEC 17025:2017)

Off:--Gandhi Nagar 5th line Extn East Berhampur-760001 Dist--Ganjam (Odisha)

Off.-Gandhinagar 3rd lane Exch. East, Berhampur-760001, Dist-Ganjam (Odisha)
Lab:-Neelanchala Nagar 3rd lane, Berhampur-760010, Dist-Ganjam (Odisha). Phone: 0680 2403321-22

Visit us: www.moderntestcenter.com
Mail: - moderntestcenter@gmail.com

Ref: - 26308/MTC/LF/7.8/14/2020

TEST CERTIFICATE

Issued to: M/s. Hindustan Zinc Limited, Zawar Mines

PO: Zawar Mines

Udaipur, Pin: 313901.

Customer Reference No: Nil Dt. 08/07/2020

Date of Receipt: 20/07/2020

TEST CERTIFICATE NO: 2113 18896

TEST CERTIFICATE NO. 211316896
TEST CERTIFICATE AS PER IS 14194 (PART-1 & PART-2): 2013

a) Nature of sample	: Dewatering Water
b) Grade / Varsity / Type/Class/Size etc.	: 1 lit bottle
c) Brand Name, if any	: Not available
d) Name of the test suggested	: Beta Emitters & Alpha Emitters
e) Batch No. & Date of Manufacture /Collection/Sampling	: Batch No: Not Specified DOS: 06/07/2020
f) Quantity	: 1 No's
g) Mode of packing	: Packed in Carton
h) Condition of Seal of Certifying Body Or the Regulatory authority	: Not applicable
i) Any other information	: No Specific Observation

PART B: SUPPLEMENTARY INFORMATIONS

a) Reference to sampling by-lab/submitted by party : Sample submitted by SCS Enviro Services, Jaipur, Rajasthan

By Lab: 1) Location

ii) Date & time

- ii) Date & time of collection
- iii) Name of lab representative

(Wherever applicable)

storing documents like gr

Sketches for the measurements taken and

The results derived, if any to be attached

c) Deviation from the test methods as

Prescribed in relevant ISS / Work

Instructions, if any

d) Deviation from environmental condition, if any

PART C: TEST RESULTS

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 Bq.l ⁻¹	BDL
2	Alpha Emitters	0.1 Bq.l ⁻¹	BDL

N.B:- BDL is below detection limit of the detector.

The DL for Beta Emitters is 0.134 Bq.l⁻¹

The DL for Alpha Emitters is 0.007 Bq.l⁻¹

PART D: REMARKS

- 1) The results stated above relate to the sample tested only.
- 2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.
- 3) The sample shall be kept for three months after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

Signature with seal

21407



Original



ULR NO: TC531220000000852F

TC-5312

Modern Test Centre

- (Accredited To AERB wide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL Through ISO/IEC 17025:2017)
- (Recognized To BIS Wide DSL Code-5123116)

Off: Gandhi Nagar, 3rd Extn. East, Barampur-760001, Dist-Ganjam (Odisha)**Lab:** Neelachal Nagar 3rd lane, Barampur-760010, Dist-Ganjam (Odisha), Phone:-0680 2403321-22**Visit Us:** www.moderntestcenter.com**Mail:** moderntestcenter@gmail.com**Ref:** - 26309/MTCL/7/2014/2020 **DATE:** 20/07/2020**TEST CERTIFICATE****Issued to:** M/s. Hindustan Zinc Limited, Zawar Mines

PO: Zawar Mines

Udaipur, Pin: 313901.

Customer Reference No: Mtl Dt. 08/07/2020**Date of Receipt:** 20/07/2020**TEST CERTIFICATE NO:** 2113 18897**TEST CERTIFICATE AS PER IS 14194 (PART-1 & PART-2), 2013****PART A: PARTICULARS OF SAMPLE SUBMITTED**

a) Nature of sample	: Dewatering Water	f) Quantity	: 1 No's
b) Grade / Variety/ Type/Class/Size etc:	1 lit bottle	g) Mode of packing	: Packed in Carton
c) Brand Name, if any	: Not available	h) Condition of Seal of	: Not applicable
d) Name of the test suggested	: Beta Emitters & Alpha Emitters	i) Certifying Body or the Regulatory authority	
e) Batch No. & Date of Manufacture / Collection / Sampling	: Batch No: Not Specified DOS: 06/07/2020	j) Any other information	: No Specific Observation

PART B: SUPPLEMENTARY INFORMATION**a) Reference to sampling by-lab/submitted by party :** Sample submitted by SCS Enviro Services, Jaipur, Rajasthan

By Lab: i) Location

ii) Date & time of collection

iii) Name of lab representative

(Wherever applicable)

b) Supporting documents like graphs, tables, Sketches for the measurements taken and

The results derived, if any to be attached

c) Deviation from the test methods as

Prescribed in relevant IS / Work

Instructions, if any

d) Deviation from environmental condition, if any

No deviation

No deviation

PART C: TEST RESULTS

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 Bq.l ⁻¹	BDL
2	Alpha Emitters	0.1 Bq.l ⁻¹	BDL

N.B:- BDL is below detection limit of the detector.

The DL for Beta Emitters is 0.134 Bq.l⁻¹The DL for Alpha Emitters is 0.008 Bq.l⁻¹**PART D: REMARKS**

1) The results stated above relates to the sample tested only.

2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.

3) The sample shall be kept for three month after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

For Modern Test Centre

Signature with seal

Authorised Signatory

21401



Original

ULR NO: TC531220000000853F

TC-5312

Modern Test Centre

- (Accredited To AERB vide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL through ISO/IEC 17025:2017)
- (Recognized by BIS vide OSL Code-5123116)

Off:-Gandhi Nagar 5th line Extn. East, Berhampur-760001, Dist-Ganjam (Odisha)Lab:-Neelanchala Nagar 3rd lane, Berhampur-760010, Dist-Ganjam (Odisha), Phone:-0680 2403321-22Visit us: www.moderntestcenter.comMail: - moderntestcenter@gmail.com

Ref: - 26310/MTC/LF/7.8/14/2020

DATE: 20/07/2020

TEST CERTIFICATE

Issued to: M/s. Hindustan Zinc Limited, Zawar Mines
PO: Zawar Mines
Udaipur, Pin: 313901.

LOCATION: MOCHIA MINE

Customer Reference No: Nil Dt. 08/07/2020

Date of Initiation of Test : 20/07/2020

Date of Receipt: 20/07/2020

Date of Completion of Test: 20/07/2020

TEST CERTIFICATE NO: 2113 18898**DATE: 20/07/2020**TEST CERTIFICATE AS PER IS 14194 (PART-1 & PART-2): 2013**PART A: PARTICULARS OF SAMPLE SUBMITTED**

a) Nature of sample	: Dewatering Water	f) Quantity	: 1 No's
b) Grade / Variety/ Type/Class/Size etc:	: 1 lit bottle	g) Mode of packing	: Packed in Carton
c) Brand Name, if any	: Not available	h) Condition of Seal of	: Not applicable
d) Name of the test suggested	: Beta Emitters & Alpha Emitters	Certifying Body Or the Regulatory authority	
e) Batch No. & Date of Manufacture /Collection/Sampling	: Batch No: Not Specified : DOS: 06/07/2020	i) Any other information	: No Specific Observation

PART B: SUPPLEMENTARY INFORMATIONS

a) Reference to sampling by-lab/submitted by party : Sample submitted by SCS Enviro Services, Jaipur, Rajasthan

By Lab: i) Location : -----
ii) Date & time of collection : -----
iii) Name of lab representative (Wherever applicable) : -----

b) Supporting documents like graphs, tables, Sketches for the measurements taken and The results derived, if any to be attached : -----

c) Deviation from the test methods as Prescribed in relevant ISS / Work Instructions, if any : No deviation

d) Deviation from environmental condition, if any : No deviation

PART C: TEST RESULTS

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 Bq.l ⁻¹	BDL
2	Alpha Emitters	0.1 Bq.l ⁻¹	BDL

N.B:- BDL is below detection limit of the detector.

The DL for Beta Emitters is 0.134 Bq.l⁻¹The DL for Alpha Emitters is 0.007 Bq.l⁻¹**PART D: REMARKS**

- 1) The results stated above relates to the sample tested only.
- 2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.
- 3) The sample shall be kept for three month after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

For Modern Test Centre

Shankar Khater
Signature with seal

Authorised Signatory

21402



Original

ULR NO: TC531220000000850F

TC-5312

Modern Test Centre

- (Accredited To AERB vide certificate No: AERB/RSD/ACC-16/R-3/2017/1073)
- (Accredited To NABL through ISO/IEC 17025:2017)
- (Recognized by BIS vide OSL Code-5123116)

Off: -Gandhi Nagar 5th line Extn. East, Berhampur-760001, Dist-Ganjam (Odisha)Lab:-Neelanchala Nagar 3rd lane, Berhampur-760010, Dist-Ganjam (Odisha), Phone:-0680 2403321-22Visit us: www.moderntestcenter.comMail: - moderntestcenter@gmail.com

Ref: - 26307/MTC/LF/7.8/14/2020

DATE: 20/07/2020

TEST CERTIFICATE

Issued to: M/s. Hindustan Zinc Limited, Zawar Mines

PO: Zawar Mines

Udaipur, Pin: 313901.

LOCATION: ZAWARMALA MINE

Customer Reference No: Nil Dt. 08/07/2020

Date of Initiation of Test : 20/07/2020

Date of Receipt: 20/07/2020

Date of Completion of Test: 20/07/2020

TEST CERTIFICATE NO: 2113 18895

DATE: 20/07/2020

TEST CERTIFICATE AS PER IS 14194 (PART-1 & PART-2): 2013

PART A: PARTICULARS OF SAMPLE SUBMITTED

a) Nature of sample	: Dewatering Water	f) Quantity	: 1 No's
b) Grade / Variety/ Type/Class/Size etc:	: 1 lit bottle	g) Mode of packing	: Packed in Carton
c) Brand Name, if any	: Not available	h) Condition of Seal of	: Not applicable
d) Name of the test suggested	: Beta Emitters & Alpha Emitters	Certifying Body Or the Regulatory authority	
e) Batch No. & Date of Manufacture /Collection/Sampling	: Batch No: Not Specified DOS: 06/07/2020	i) Any other information	: No Specific Observation

PART B: SUPPLEMENTARY INFORMATIONS

a) Reference to sampling by lab/submitted by party : Sample submitted by SCS Enviro Services, Jaipur, Rajasthan

By Lab: i) Location : -----

ii) Date & time of collection : -----

iii) Name of lab representative : -----

(Wherever applicable)

b) Supporting documents like graphs, tables, Sketches for the measurements taken and The results derived, if any to be attached : -----

c) Deviation from the test methods as Prescribed in relevant ISS / Work Instructions, if any : No deviation

d) Deviation from environmental condition, if any : No deviation

PART C: TEST RESULTS

Sl. No	Parameter	Specified value maximum as per IS 10500:2012	Result
1	Beta Emitters	1 Bq.l ⁻¹	BDL
2	Alpha Emitters	0.1 Bq.l ⁻¹	BDL

N.B:- BDL is below detection limit of the detector.

The DL for Beta Emitters is 0.114 Bq.l⁻¹The DL for Alpha Emitters is 0.007 Bq.l⁻¹**PART D: REMARKS**

- 1) The results stated above relates to the sample tested only.
- 2) This report in full or in part shall not be published, advertised, used for any legal action unless prior permission has been secured from the competent Authority of the laboratory.
- 3) The sample shall be kept for three month after the test and can be returned on request or shall be destroyed. Any customer complain or by regulatory authority shall be entertained, if and only if the complain is registered within one month from date of report.

For Modern Test Centre

Shankar Khatai
Signature with seal
Authorised Signatory

21399

राजस्थान

2012-2013

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RAJASTHAN PATRIKA, Udaipur Edition 10.01.2017, Page 7



ra.jasthanpatrika.com

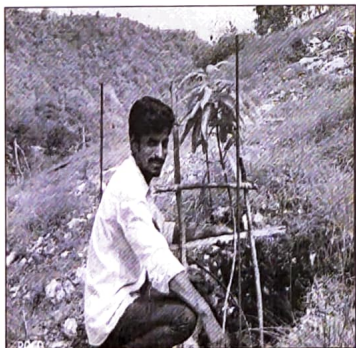

राजस्थान पत्रिका, उदयपुर, मंगलवार 10.01.2017





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ANNEXURE-8

Compliance status of Commitments made during previous public hearing

S. No.	Issues	Action taken
1	Appreciation for education especially Girls education.	<ul style="list-style-type: none"> 15 meritorious girls from our nearby villages supported for higher education by getting them enrolled for post-graduation at Ringus College. HZL is lending support in improving the board results of students under Shiksha Sambal Project in 9 Govt Schools and as a part of which 2 camps were organized bringing together 500+ students of these Schools (Summer Camp & Diwali Learning Camp) for better coverage of the syllabus Two students of Nevatalai Village has been selected under Unchi Udan Project and is carrying out their coaching for engineering competitive exams in Udaipur with CSR Project Partner 'Resonance'.
		
2	Demand for set-up of more industries in the area for employment generation.	<p>The expansion has increased direct and indirect employment in the area. Apart from this, HZL is carrying out CSR activities for livelihood generation (promoting micro enterprise through Sakhi women and agri based livelihood opportunities through Samadhan project).</p> <p>As a way to improve the livelihood of rural women, a Poultry initiative was inaugurated in which 50 women were identified and provided 20 chicks along with poultry kit</p>

S. No.	Issues	Action taken
		Brought together 700+ farmers to open Farmer Producer Organization(Zawat Matha FPO) which provides seeds, fertilizers, machinaries etc at subsidised rates
3	Appreciation for maintaining good environment and plantation in the area.	We are regularly carrying out plantation in and around our mine operations. Over last 5 years, we have completed planation in 225 ha area through forest department under RDF scheme-1&2. In 2021, also planted in 75 ha through forest department under RDF scheme-1&2. Planted 2500 nos. of plantation at tailing storage facility and 1000 nos. as gap plantation in mine area.
4	Chances of dust generation from Tailing Dam.	Various dust control measures like water sprinkling is being done continuously and same will be continued. Compaction of tailing after disposal is being done.
5	General problem of tree felling by villagers in the area.	<ul style="list-style-type: none"> Awareness imparted to the local community for not cutting the trees in coordination with Forest department. Through CSR program, HZL is promoting developing “Ultra High-density plantation” and providing required plantation. Also, training is being imparted to the farmers for proper nourishment of plantation. Photograph enclosed. Hi-Tech Plantation of Strawberry and English vegetables is been practiced out by 5 farmers. Plantation drive is been carried out by Sakhi women in 7 panchayats.
		

S. No.	Issues	Action taken
		 
6	Improvement of road network in the area. (Maintenance and augmentation of Tidi Zawar Road)	<ul style="list-style-type: none"> - Construction of Zawar to Tidi road of around 3.5 KM in PPP mode with PWD department was carried out. This has provided convenience to the locals for better connectivity with National highway. Photograph enclosed. - In addition to this, 180 m cc internal road constructed at Nevatalai panchayat and 200 m cc road constructed at Tidi panchayat, the service is being utilized by the community members.
		Construction of Zawar to Tidi road of around 3.5 KM in PPP mode with PWD department
7	Water conservation and harvesting measures.	New Rain water harvesting structures (39 structures) along with deepening / de-silting of existing rain water harvesting structures for the period of FY 17 to FY 22

S. No.	Issues	Action taken
8	Drinking water problem- Kanpur village	Regular supply of drinking water to the villagers of Kanpur has been ensured through tankers and renovation work is in process for the already installed water supply system.
	